SOIL GAS AND LIMITED SOIL SAMPLING REPORT
11862 BURKE STREET
SANTA FE SPRINGS, CALIFORNIA

Prepared for:

Earl Manufacturing
11862 Burke Street
Santa Fe Springs, CA 90670

Prepared by:

SCS ENGINEERS
3711 Long Beach Blvd., 9th Floor
Long Beach, CA 90807
(562) 426-9544

December 1998
File No. 01198173

This Soil Gas and Limited Soil Sampling Report for property located 11862 Burke Street, Santa Fe Springs, California, dated December 1998, was prepared and reviewed by the following:

Kevin Green, R.G.
Project Manager

Thomas Dong, R.E.A
Project Director
SCS ENGINEERS

SOIL GAS AND LIMITED SOIL SAMPLING REPORT
11862 BURKE STREET
SANTA FE SPRINGS, CALIFORNIA

INTRODUCTION AND BACKGROUND

This submittal serves as SCS' report for the soil gas and limited soil sampling assessment that was conducted at the above-referenced site on November 13, 1998. A total of 10 soil vapor samples at 8 locations in the area of the former underground storage tank and associated fill port/vent pipe were sampled and analyzed for volatile organic compounds (VOCs) as listed in EPA Methods 8010/8020. In addition, two soil matrix samples were collected in the former tank area and analyzed for VOCs. A total of 15 samples (including blanks and a duplicate) were analyzed during the completion of field work.

On August 13, 1997, a 1,000 gallon underground storage tank was removed from the Earl Manufacturing property by United Pacific Environmental (UPE). Review of UPE's tank removal report indicated that the tank "was intact and only moderate rusting was noted." No holes were observed in the tank after removal from the ground.

After removal of the tank, the pit was backfilled with soil within approximately 8 inches of the surface. The area was covered with a plastic tarp which was removed by Earl Manufacturing personnel for access to complete this investigation.

According to the UPE report, soil samples were collected four feet below the tank invert (depth of samples was approximately 10 feet below grade) at each end of the tank. In addition, a sample of the sludge was also collected for laboratory analysis. These samples were analyzed for VOCs using EPA Method 8260.

Laboratory results of the tank sludge indicated that more than 20 VOCs were present in this sample. An abbreviated list of reported VOCs in the sludge is provided below:

- butylbenzene
- 1,2 dichloroethylene
- isopropylbenzene
- isopropyltoluene
- 1,1 dichloroethane (1,1, DCA)
- napthalene
- trimethylbenzene
- chloromethane

- methylene chloride
- tetrachloroethylene (PCE)
- 1,1,1 trichloroethane
- trichloroethylene (TCE)
- vinyl chloride
- total xylenes

However, only two VOCs (PCE and 1,1, DCA) were reported in soil samples collected beneath the tank. UPE reported PCE at 422,000 ug/kg in sample 1A (west end tank sample) and 1,470 ug/kg in sample 1B (east end tank sample). 1,1 DCA was reported in sample 1B only at 228 ug/kg.

SOIL GAS SURVEY AND LIMITED SOIL SAMPLING

A Strataprobe hydraulic-push rig was used to collect soil gas and soil matrix samples during field activities. Soil gas survey sample points were installed to a depth of approximately 5 to 18 feet (depending on location) below ground surface (bgs). In addition two soil matrix samples were collected at 11.5 and 20 feet bgs in the area of under tank sample 1A (reported with 422,000 ug/kg of tetrachloroethylene as referenced in UPE tank removal report). Soil gas and soil samples were analyzed for VOCs using EPA Methods 8010 and 8020. A map showing soil gas and soil sampling locations is provided in Attachment A.

Transglobal Environmental Geochemistry (TEG) of Solana Beach, California provided a mobile analytical laboratory and support personnel/equipment to assist SCS in completing the soil gas survey. As previously stated, field work was completed on November 13, 1998.

Materials and Methods

Each of the soil gas probes consisted of a hollow three quarter-inch diameter steel probe fitted with a steel drive tip and eighth-inch diameter Nylaflow tubing to recover samples. Probes were driven to the prescribed depth (between 5 and 18 feet depending on location) using a Strataprobe direct push drill rig. Soil gas samples were collected by slightly retracting the probe, exposing sampling ports in the drive tip, and withdrawing subsurface vapors through the Nylaflow tubing using a disposal syringe. Appropriate volumes of vapor were withdrawn to purge the Nylaflow tubing and recover a representative soil gas sample. A syringe was used to recover soil vapor samples for laboratory analysis. New Nylaflow tubing and clean syringes were used for each sample.

Soil samples were collected using a split-spoon sampler equipped with acetate-lined plastic sleeves. According to on-site personnel, the depth of the tank excavation (prior to backfilling) was approximately 10 feet bgs. Therefore, SCS collected two soil matrix samples at depths of 11.5 and 20 feet bgs. Recovered soil samples were a medium brown, slightly moist clayey silt with no noticeable odor or staining.

Soil gas samples were immediately taken to the on-site state-certified TEG lab and the contents injected directly into the gas chromatograph for analysis. The two soil samples collected from the tank pit area were analyzed for VOCs using EPA Methods 8010 and 8020 on November 14, 1998 by TEG. Chain-of-custody documentation was completed in order to accurately track the samples from the point of collection through analysis.

ANALYTICAL RESULTS

Soil Vapor

Analytical data and a facility map with soil gas sampling locations are provided in Attachment A. As shown in the data, only 3 of the 10 soil vapor samples collected from the tank area resulted in detectable concentrations of PCE. The highest concentration of PCE was found in location SV5 (at 8 feet bgs) at 21 ug/l (micrograms per liter). Other chlorinated degradation products (e.g., 1,2-dichloroethene, 1,1-dichloroethene, and trichloroethene) were not detected in soil gas samples analyzed from the site.

Soil Samples

As previously stated, two soil samples were collected beneath the former tank area where elevated concentrations of PCE (422,000 ug/kg) were reported by UPE. Laboratory results for these samples collected at 11.5 and 20 feet bgs in the same area resulted in respective PCE concentrations of 270 and 950 ug/kg. These PCE soil concentrations are significantly lower than the values reported by UPE in their tank removal report.

SUMMARY

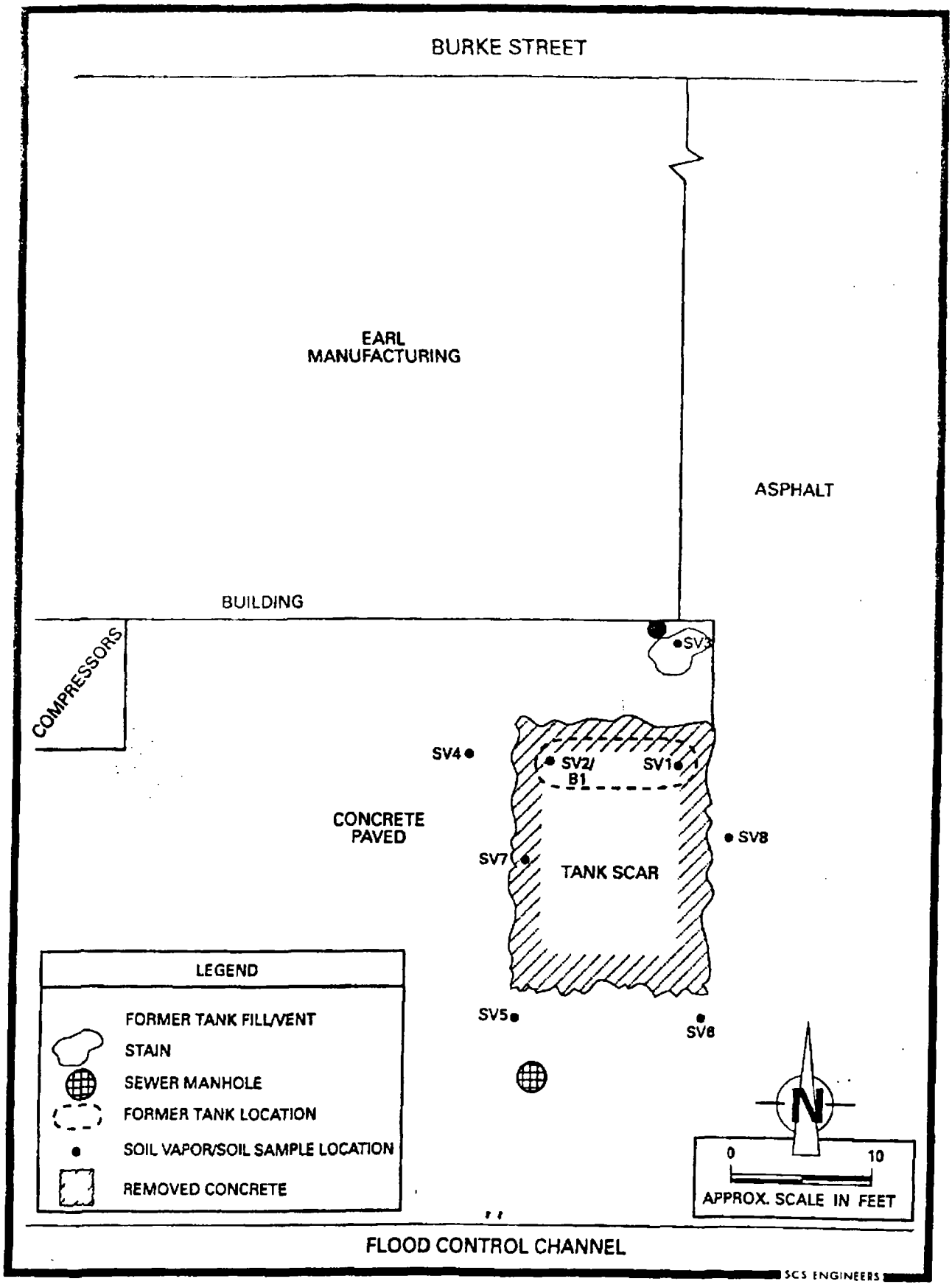
Results of the soil gas survey indicate that no significant PCE vapor is present in subsurface soils in the area of the former underground storage tank. Although soil samples contained detectable concentrations of PCE, it is the opinion of SCS that the concentrations detected do not warrant further investigation and/or remediation. This opinion is based on the following:

- Data generated during this investigation did not indicate the tank pit area contained elevated concentrations of PCE or other VOCs in soil vapor.
- PCE concentrations detected in soil samples do not corroborate the findings of UPE as stated in their tank removal report dated September 12, 1997.

- The concentrations of PCE detected in soil samples are well below the EPA Region IX Preliminary Remediation Goals (PRGs) for industrial sites (16 mg/kg) and for residential sites (4.7 mg/kg).
- Ground water was not encountered by SCS during field work.
- Ground water in this area of Santa Fe Springs has been contaminated with VOCs including PCE, TCE, etc.
- Based on extent of VOC ground water contamination in this area of Santa Fe Springs, the Los Angeles Regional Water Quality Control Board may designate this area as a regional ground water contaminant "corridor."

Therefore, on behalf of Earl Manufacturing, SCS respectfully requests a no further action letter from the City of Santa Fe Springs Fire Department.

ATTACHMENT A
MAP AND ANALYTICAL DATA



Map Showing Soil Vapor and Soil Sample Locations.

teg

SCS ENGINEERS PROJECT # 0198173
EARL MANUFACTURING
11862 BURKE STREET
SANTA FE SPRINGS, CA

TEG Project #981113W1
GC SHIMADZU 14A RIGHT
VOLATILE HALOGENATED AND AROMATIC HYDROCARBONS (EPA Method 8010/8020) ANALYSES OF SOIL VAPOR
SOIL VAPOR DATA IN UG/L-VAPOR

	BLANK	SV1-10	SV1-18	SV2-10	SV2-18	SV3-5
DATE	11/13/98	11/13/98	11/13/98	11/13/98	11/13/98	11/13/98
ANALYSIS TIME	08:39	09:00	09:22	09:44	10:06	10:28
SAMPLING DEPTH (feet)	–	10	18	10	18	5
VOLUME WITHDRAWN (cc)	200	180	260	180	260	140
VOLUME INJECTED	1	1	1	1	1	1
DILUTION FACTOR	1	1	1	1	1	1
CARBON TETRACHLORIDE	nd	nd	nd	nd	nd	nd
CHLOROFORM	nd	nd	nd	nd	nd	nd
1,1-DICHLORO ETHANE	nd	nd	nd	nd	nd	nd
1,2-DICHLORO ETHANE	nd	nd	nd	nd	nd	nd
1,1-DICHLORO ETHENE	nd	nd	nd	nd	nd	nd
CIS-1,2-DICHLORO ETHENE	nd	nd	nd	nd	nd	nd
TRANS-1,2-DICHLORO ETHENE	nd	nd	nd	nd	nd	nd
DICHLOROMETHANE	nd	nd	nd	nd	nd	nd
TETRACHLORO ETHENE	nd	nd	nd	nd	nd	nd
1,1,1,2-TETRACHLORO ETHANE	nd	nd	nd	nd	nd	nd
1,1,2,2-TETRACHLORO ETHANE	nd	nd	nd	nd	nd	nd
1,1,1-TRICHLORO ETHANE	nd	nd	nd	nd	nd	nd
1,1,2-TRICHLORO ETHANE	nd	nd	nd	nd	nd	nd
TRICHLORO ETHENE	nd	nd	nd	nd	nd	nd
1,1,2-TRICHLOROTRIFLUOROETHANE (FR113)	nd	nd	nd	nd	nd	nd
BENZENE	nd	nd	nd	nd	nd	nd
ETHYLBENZENE	nd	nd	nd	nd	nd	nd
TOLUENE	nd	nd	nd	nd	nd	nd
m&p-XYLENES	nd	nd	nd	nd	nd	nd
o-XYLENE	nd	nd	nd	nd	nd	nd
SURROGATES						
1 4 DIFLUORO BENZENE	97%	91%	89%	100%	102%	92%
CHLOROBENZENE	108%	101%	101%	114%	116%	104%
4 BROMOFLUORO BENZENE	93%	90%	91%	102%	104%	94%

ND INDICATES NOT DETECTED AT A DETECTION LIMIT OF [illegible]0 UG/L-VAPOR FOR EACH COMPOUND

ANALYSES PERFORMED ON-SITE IN TEG'S DOHS CERTIFIED MOBILE LABORATORY (CERT #1745)
ANALYSES PERFORMED BY: MR. ALLEN GLOVER
DATA REVIEWED BY:

Wayne Hardman 11-24-98

November 24, 1998

Mr. Tom Dong
Secor
2655 Camino Del Rio North
Suite 302
San Diego, CA 92108

SUBJECT: DATA REPORT – EARL MANUFACTURING – 11862 BURKE STREET – SANTA FE SPRINGS, CA - SECOR PROJECT #0198173

TEG Project # 981113WI

Mr. Dong:

Please find enclosed a data report for the above referenced location. Samples were analyzed on-site in TEG's DOHS certified mobile laboratory (CERT #1745).

Project Summary

The following analyses were conducted:

- 2 soils & 10 vapors for volatile halogenated hydrocarbons by EPA Method 8010
- 2 soils & 10 vapors for volatile aromatic hydrocarbons (BTEX) by Modified EPA Method 8020

The samples were received on-site in appropriate containers with appropriate labels, seals, and chain-of-custody documentation.

Project Narrative

The results for all analyses and required QA/QC analyses are summarized in the enclosed tables. All calibrations, blanks, surrogates, and spike recoveries fulfill quality control criteria. No data qualifiers (flags) apply to any of the reported data.

TEG appreciates the opportunity to provide analytical services to Secor on this project. If you have any questions relating to this data or report, please do not hesitate to contact us.

Sincerely,

Dr. Blayne Hartman

432 NORTH CEDROS AVENUE • SOLANA BEACH, CA 92075 • 619-793-0401 • FAX 619-793-0404

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SCS ENGINEERS PROJECT # 0198173
EARL MANUFACTURING
11862 BURKE STREET
SANTA FE SPRINGS, CA

TEG Project #981113W1
GC SHIMADZU 14A RIGHT
VOLATILE HALOGENATED AND AROMATIC HYDROCARBONS (EPA Method 8010/8020) ANALYSES OF SOIL VAPOR
SOIL VAPOR DATA IN UG/L-VAPOR

	SV4-8	SV5-8	SV5-8 DUP	SV6-8	SV7-10	SV8-8
DATE	11/13/98	11/13/98	11/13/98	11/13/98	11/13/98	11/13/98
ANALYSIS TIME	10:50	11:18	11:41	12:06	12:29	12:51
SAMPLING DEPTH (feet)	8	8	8	8	10	8
VOLUME WITHDRAWN (cc)	140	140	140	140	180	140
VOLUME INJECTED	1	1	1	1	1	1
DILUTION FACTOR	1	1	1	1	1	1
CARBON TETRACHLORIDE	nd	nd	nd	nd	nd	nd
CHLOROFORM	nd	nd	nd	nd	nd	nd
1,1-DICHLORO ETHANE	nd	nd	nd	nd	nd	nd
1,2-DICHLORO ETHANE	nd	nd	nd	nd	nd	nd
1,1-DICHLORO ETHENE	nd	nd	nd	nd	nd	nd
CIS-1,2-DICHLORO ETHENE	nd	nd	nd	nd	nd	nd
TRANS-1,2-DICHLORO ETHENE	nd	nd	nd	nd	nd	nd
DICHLOROMETHANE	nd	nd	nd	nd	nd	nd
TETRACHLORO ETHENE	nd	21	17	2.4	2.5	nd
1,1 1,2-TETRACHLORO ETHANE	nd	nd	nd	nd	nd	nd
1,1,2,2-TETRACHLORO ETHANE	nd	nd	nd	nd	nd	nd
1,1,1-TRICHLORO ETHANE	nd	nd	nd	nd	nd	nd
1,1,2-TRICHLORO ETHANE	nd	nd	nd	nd	nd	nd
TRICHLORO ETHENE	nd	nd	nd	nd	nd	nd
1,1,2-TRICHLOROTRIFLUOROETHANE (FR113)	nd	nd	nd	nd	nd	nd
BENZENE	nd	nd	nd	nd	nd	nd
ETHYLBENZENE	nd	nd	nd	nd	nd	nd
TOLUENE	nd	nd	nd	nd	nd	nd
m&p-XYLENES	nd	nd	nd	nd	nd	nd
o-XYLENE	nd	nd	nd	nd	nd	nd
SURROGATES						
1,4 DIFLUORO BENZENE	91%	92%	119%	92%	90%	89%
CHLOROBENZENE	103%	103%	117%	103%	101%	100%
4 BROMOFLUORO BENZENE	92%	90%	100%	91%	89%	90%

ND INDICATES NOT DETECTED AT A DETECTION LIMIT OF 1.0 UG/L-VAPOR FOR EACH COMPOUND

ANALYSES PERFORMED ON-SITE IN TEG'S DOHS CERTIFIED MOBILE LABORATORY (CERT #1745)
ANALYSES PERFORMED BY: MR. ALLEN GLOVER
DATA REVIEWED BY: Blayne Hartman 11-24-98

teg

SCS ENGINEERS PROJECT #0198173
EARL MANUFACTURING
11862 BURKE STREET
SANTA FE SPRINGS, CA

TEG Project #981113W1

VOLATILE HALOGENATED AND AROMATIC HYDROCARBONS (EPA Method 8010/8020) SOIL ANALYSES IN UG/KG

Sample ID	BLANK	SV2/B1-11.5	SV2/B1-11.5	SV2/B1-20	SV2/B1-20
Date	11/14/98	11/14/98	11/14/98	11/14/98	11/14/98
Time	8:24	12:38	14:20	13:08	15:34
Dilution Factor	1	1	5	1	20
CARBON TETRACHLORIDE	nd	nd	--	nd	--
CHLOROFORM	nd	nd	--	nd	--
1,1-DICHLORO ETHANE	nd	100	--	>>>>>	190
1,2-DICHLORO ETHANE	nd	nd	--	nd	--
1,1-DICHLORO ETHENE	nd	nd	--	nd	--
CIS-1,2-DICHLORO ETHENE	nd	nd	--	nd	--
TRANS-1,2-DICHLORO ETHENE	nd	nd	--	nd	--
DICHLOROMETHANE	nd	nd	--	nd	--
TETRACHLORO ETHENE	nd	>>>>>	270	>>>>>	950
1,1,1,2-TETRACHLORO ETHANE	nd	nd	--	nd	--
1,1,2,2-TETRACHLORO ETHANE	nd	nd	--	nd	--
1,1,1-TRICHLORO ETHANE	nd	3.0	--	7.8	--
1,1,2-TRICHLORO ETHANE	nd	nd	--	nd	--
TRICHLORO ETHENE	nd	8.0	--	11	--
1,1,2-TRICHLOROTRIFLUOROETHANE (FR113)	nd	nd	--	nd	--
BENZENE	nd	nd	--	nd	--
CHLOROBENZENE	nd	nd	--	nd	--
ETHYLBENZENE	nd	nd	--	nd	--
TOLUENE	nd	nd	--	nd	--
m&p-XYLENES	nd	nd	--	nd	--
o-XYLENE	nd	nd	--	nd	--
SURROGATES					
1,4 DIFLUORO BENZENE	107%	99%	113%	105%	108%
BROMOFLUORO BENZENE	104%	102%	107%	99%	112%

ND INDICATES NOT DETECTED AT DETECTION LIMIT OF 5 UG/KG FOR EACH COMPOUND

ANALYSES PERFORMED ON-SITE IN TEG'S CA DOHS CERTIFIED MOBILE LABORATORY (CERT #1745)
ANALYSES PERFORMED BY: MR. ALLEN GLOVER
DATA REVIEWED BY: Diane Lindsman 11-24-98

teg

QA/QC - CALIBRATION DATA

DATE 11/13/98
TEG Project #981113W1
WINNEBAGO 1

SUPPLY SOURCE: CONTINUING CALIBRATION (OPENING) ACCUSTANDARD LOT # A7120160
SUPPLY SOURCE: QUALITY CONTROL (CLOSING) ACCUSTANDARD LOT # A7120170
INSTRUMENT: SHIMADZU GC14A RIGHT

			OPENING STANDARD					CLOSING STANDARD				
COMPOUND	DETECTOR	AVE RF	MASS	RT	AREA	RF	%DIFF	MASS	RT	AREA	RF	%DIFF
1,1-DICHLORO ETHANE	HALL	122.9	20	7.1	2,497	124.9	1.6%	20	7.1	2,376	118.8	3.3%
1,2-DICHLORO ETHANE	HALL	220.3	20	9.4	4,541	227.1	3.1%	20	9.4	4,796	239.8	8.9%
1,1-DICHLORO ETHENE	PID	9.3	20	5.4	167	8.4	10.2%	20	5.4	190	9.5	2.2%
CIS-1,2-DICHLORO ETHENE	PID	12.0	20	7.9	267	13.4	11.3%	20	7.9	251	12.6	4.6%
TRANS-1,2-DICHLORO ETHENE	PID	20.9	20	6.4	446	22.3	6.7%	20	6.4	445	22.3	6.5%
TETRACHLORO ETHENE	PID	12.5	20	14.3	288	14.3	14.4%	20	14.3	279	14.0	11.6%
1,1,1-TRICHLORO ETHANE	HALL	131.9	20	8.8	2,898	144.9	9.9%	20	8.8	2,979	149.0	12.9%
1,1,2-TRICHLORO ETHANE	HALL	96.7	20	13.6	2,158	107.9	11.6%	20	13.6	1,971	98.6	1.9%
TRICHLORO ETHENE	PID	16.1	20	10.5	330	16.5	2.5%	20	10.5	307	15.4	4.7%
1,1,2-TRICHLOROTRIFLUOROETHANE (FR113)	HALL	16.2	20	5.3	293	14.7	9.6%	20	5.3	346	17.3	6.8%
BENZENE	PID	27.0	20	9.5	559	28.0	3.5%	20	9.5	531	26.6	1.7%
ETHYLBENZENE	PID	27.1	20	16.2	523	26.2	3.5%	20	16.2	472	23.6	12.9%
TOLUENE	PID	26.9	20	12.9	588	29.4	9.3%	20	12.9	547	27.4	1.7%
m&p-XYLENES	PID	31.8	40	16.4	1,326	33.2	4.2%	40	16.4	1,038	26.0	18.4%
o-XYLENE	PID	26.3	20	17.4	531	26.6	1.0%	20	17.4	467	23.4	11.2%
1,4 DIFLUORO BENZENE	PID	10.6	20	9.8	242	12.1	12.0%	20	9.8	227	11.4	5.1%
CHLOROBENZENE	PID	24.6	20	16.1	552	27.6	12.2%	20	16.1	497	24.9	1.0%
4 BROMOFLUORO BENZENE	PID	41.1	20	19.1	871	43.6	6.0%	20	19.1	798	39.9	2.9%

ANALYSES PERFORMED ON-SITE IN TEG'S DOHS CERTIFIED MOBILE LABORATORY (CERT #1745)
ANALYSES PERFORMED BY: MR. ALLEN GLOVER
DATA REVIEWED BY:

Wayne Workman
11-24-98

teg

QA/QC REPORT - CALIBRATION DATA

DATE 11/14/98
TEG Project #981113W1
WINNEBAGO 1 (cert #1745)

SUPPLY SOURCE:ACCUSTANDARD A7120160 -- A7120170
INSTRUMENT: SHIMADZU GC14A PURGE & TRAP

			OPENING STANDARD					CLOSING STANDARD				
COMPOUND	DETECTOR	AVE RF	MASS	RT	AREA	RF	%DIFF	MASS	RT	AREA	RF	%DIFF
1,1-DICHLORO ETHANE	HALL	134.1	40	8.5	5,883	147.1	9.7%	40	8.5	6,267	156.7	16.8%
1,2-DICHLORO ETHANE	HALL	161.1	40	11.5	7,078	177.0	9.8%	40	11.5	7,102	177.6	10.2%
1,1-DICHLORO ETHENE	PID	2.2	40	6.5	84	2.1	2.8%	40	6.5	83	2.1	3.4%
CIS-1,2-DICHLORO ETHENE	PID	3.0	40	9.5	113	2.8	5.1%	40	9.5	122	3.1	2.5%
TRANS-1,2-DICHLORO ETHENE	PID	5.1	40	7.7	195	4.9	3.8%	40	7.7	229	5.7	13.0%
TETRACHLORO ETHENE	PID	3.4	40	17.8	138	3.5	2.4%	40	17.8	145	3.6	7.6%
1,1,1-TRICHLORO ETHANE	HALL	149.4	40	10.7	6,317	157.9	5.7%	40	10.7	5,475	136.9	8.4%
1,1,2-TRICHLORO ETHANE	HALL	97.4	40	16.9	4,339	108.5	11.4%	40	16.9	4,440	111.0	14.0%
TRICHLORO ETHENE	PID	3.8	40	12.9	149	3.7	1.0%	40	12.9	155	3.9	3.0%
1,1,2-TRICHLOROTRIFLUOROETHANE (FR113)	HALL	68.0	40	6.3	2,777	69.4	2.1%	40	6.3	2,934	73.4	7.8%
BENZENE	PID	7.0	40	11.5	264	6.6	6.3%	40	11.5	281	7.0	0.2%
1,4 DFB	PID	2.3	40	12.0	91	2.3	2.4%	40	12.0	93	2.3	0.2%
BFB	PID	5.9	40	23.8	244	6.1	3.8%	40	23.8	243	6.1	3.4%
ETHYLBENZENE	PID	7.0	40	20.3	300	7.5	7.6%	40	20.3	285	7.1	2.2%
TOLUENE	PID	6.9	40	16.0	287	7.2	4.0%	40	16.0	301	7.5	9.1%
m&p-XYLENES	PID	7.8	80	20.5	635	7.9	1.9%	80	20.5	684	8.6	9.7%
o-XYLENE	PID	6.7	40	21.8	281	7.0	4.2%	40	21.8	305	7.6	13.1%

ANALYSES PERFORMED ON-SITE IN TEG'S CA DOHS CERTIFIED MOBILE LABORATORY (CERT #1745)
ANALYSES PERFORMED BY: MR. ALLEN GLOVER
DATA REVIEWED BY:

Blayne Hartman
11-24-98

teg

QA/QC REPORT - MS/MSD

DATE: 11/10/98
TEG Project #981113W1
WINNEBAGO 1 (cert #1745)

SUPPLY SOURCE: ACCUSTANDARD A7120170
INSTRUMENT: SHIMADZU GC14A PURGE & TRAP
SAMPLE: B1-10

COMPOUND	DETECTOR	AVE RF	SPIKE	MS RECOV.	%RECOV	MSD RECOV.	%RECOV	RPD	ACCEPTABLE RPD	ACCEPTABLE RECOVERY
1,1-DICHLORO ETHANE	HALL	134.1	50	53.5	107.0%	51.0	102.0%	4.8%	15%	65% - 135%
1,2-DICHLORO ETHANE	HALL	161.1	50	56.2	112.4%	59.3	118.6%	5.4%	15%	65% - 135%
1,1-DICHLORO ETHENE	PID	2.2	50	46.8	93.6%	45.2	90.4%	3.5%	15%	65% - 135%
CIS-1,2-DICHLORO ETHENE	PID	3.0	50	43.7	87.4%	44.6	89.2%	2.0%	15%	65% - 135%
TRANS-1,2-DICHLORO ETHENE	PID	5.1	50	48.3	96.6%	46.3	92.6%	4.2%	15%	65% - 135%
TETRACHLORO ETHENE	PID	3.4	50	45.9	91.8%	45.4	90.8%	1.1%	15%	65% - 135%
1,1,1-TRICHLORO ETHANE	HALL	149.4	50	62.3	124.6%	61.5	123.0%	1.3%	15%	65% - 135%
1,1,2-TRICHLORO ETHANE	HALL	97.4	50	57.2	114.4%	59.2	118.4%	3.4%	15%	65% - 135%
TRICHLORO ETHENE	PID	3.8	50	46.2	92.4%	46.2	92.4%	0.0%	15%	65% - 135%
1,1,2-TRICHLOROTRIFLUOROETHANE (FR113)	HALL	68.0	50	55.3	110.6%	57.5	115.0%	3.9%	15%	65% - 135%
BENZENE	PID	7.0	50	43.3	86.6%	44.1	88.2%	1.8%	15%	65% - 135%
1,4 DFB	PID	2.3	50	43.8	87.6%	45.5	91.0%	3.8%	15%	65% - 135%
BFB	PID	5.9	50	42.7	85.4%	45.1	90.2%	5.5%	15%	65% - 135%
ETHYLBENZENE	PID	7.0	50	47.8	95.6%	50.4	100.8%	5.3%	15%	65% - 135%
TOLUENE	PID	6.9	50	49.2	98.4%	47.4	94.8%	3.7%	15%	65% - 135%
m&p-XYLENES	PID	7.8	100	97.1	97.1%	93.3	93.3%	4.0%	15%	65% - 135%
o-XYLENE	PID	6.7	50	46.7	93.4%	48.4	96.8%	3.6%	15%	65% - 135%

ANALYSES PERFORMED ON-SITE IN TEG'S CA DOHS CERTIFIED MOBILE LABORATORY (CERT #1745)
ANALYSES PERFORMED BY: MR. ALLEN GLOVER
DATA REVIEWED BY:

Wayne Hartman
11-24-98

teg

SCS ENGINEERS PROJECT #0198173
EARL MANUFACTURING
11852 BURKE STREET
SANTA FE SPRINGS, CA

TEG Project #981113W1
GC SHIMADZU 14A RIGHT
VOLATILE HALOGENATED AND AROMATIC HYDROCARBONS (EPA Method 8010/8020) ANALYSES OF SOIL VAPOR
AREA COUNTS

	BLANK	BLANK	SV1-10	SV1-10	SV1-18	SV1-18	SV2-10	SV2-10
DATE	11/13/98	11/13/98	11/13/98	11/13/98	11/13/98	11/13/98	11/13/98	11/13/98
ANALYSIS TIME	6:39	6:39	9:00	9:00	9:22	9:22	9:44	9:44
SAMPLING DEPTH (feet)	--	--	10	10	18	18	10	10
VOLUME WITHDRAWN (cc)	200	200	180	180	260	260	180	180
VOLUME INJECTED	1	1	1	1	1	1	1	1
DILUTION FACTOR	1	1	1	1	1	1	1	1
	RT	AREA	RT	AREA	RT	AREA	RT	AREA
CARBON TETRACHLORIDE	nd	nd	nd	nd	nd	nd	nd	nd
CHLOROFORM	nd	nd	nd	nd	nd	nd	nd	nd
1,1-DICHLORO ETHANE	nd	nd	nd	nd	nd	nd	nd	nd
1,2-DICHLORO ETHANE	nd	nd	nd	nd	nd	nd	nd	nd
1,1-DICHLORO ETHENE	nd	nd	nd	nd	nd	nd	nd	nd
CIS-1,2-DICHLORO ETHENE	nd	nd	nd	nd	nd	nd	nd	nd
TRANS-1,2-DICHLORO ETHENE	nd	nd	nd	nd	nd	nd	nd	nd
DICHLOROMETHANE	nd	nd	nd	nd	nd	nd	nd	nd
TETRACHLORO ETHENE	nd	nd	nd	nd	nd	nd	nd	nd
1,1,1,2-TETRACHLORO ETHANE	nd	nd	nd	nd	nd	nd	nd	nd
1,1,2,2-TETRACHLORO ETHANE	nd	nd	nd	nd	nd	nd	nd	nd
1,1,1-TRICHLORO ETHANE	nd	nd	nd	nd	nd	nd	nd	nd
1,1,2-TRICHLORO ETHANE	nd	nd	nd	nd	nd	nd	nd	nd
TRICHLORO ETHENE	nd	nd	nd	nd	nd	nd	nd	nd
1,1,2-TRICHLOROTRIFLUOROETHANE (FR113)	nd	nd	nd	nd	nd	nd	nd	nd
BENZENE	nd	nd	nd	nd	nd	nd	nd	nd
ETHYLBENZENE	nd	nd	nd	nd	nd	nd	nd	nd
TOLUENE	nd	nd	nd	nd	nd	nd	nd	nd
m&p-XYLENES	nd	nd	nd	nd	nd	nd	nd	nd
o-XYLENE	nd	nd	nd	nd	nd	nd	nd	nd
SURROGATES								
1,4 DIFLUORO BENZENE	9.9	210	9.8	197	9.6	193	9.7	217
CHLOROBENZENE	16.2	531	16.1	497	16.0	496	16.1	563
4 BROMOFLUORO BENZENE	19.2	766	19.0	742	19.0	745	19.1	837

ND INDICATES NOT DETECTED AT A DETECTION LIMIT OF 1.0 UG/L-VAPOR FOR EACH COMPOUND

ANALYSES PERFORMED ON-SITE IN TEG'S DOHS CERTIFIED MOBILE LABORATORY (CERT #1745)
ANALYSES PERFORMED BY: MR. ALLEN GLOVER
DATA REVIEWED BY:

SCS ENGINEERS PROJECT #0198173
EARL MANUFACTURING
11852 BURKE STREET
SANTA FE SPRINGS, CA

TEG Project #981113W1
GC SHIMADZU 14A RIGHT
VOLATILE HALOGENATED AND AROMATIC HYDROCARBONS (EPA Method 8010/8020) ANALYSES OF SOIL VAPOR
AREA COUNTS

	SV2-18	SV2-18	SV3-5	SV3-5	SV4-8	SV4-8	SV5-8	SV5-8
DATE	11/13/98	11/13/98	11/13/98	11/13/98	11/13/98	11/13/98	11/13/98	11/13/98
ANALYSIS TIME	10:06	10:06	10:28	10:28	10:50	10:50	11:18	11:18
SAMPLING DEPTH (feet)	18	18	5	5	8	8	8	8
VOLUME WITHDRAWN (cc)	260	260	140	140	140	140	140	140
VOLUME INJECTED	1	1	1	1	1	1	1	1
DILUTION FACTOR	1	1	1	1	1	1	1	1
	RT	AREA	RT	AREA	RT	AREA	RT	AREA
CARBON TETRACHLORIDE	nd	nd	nd	nd	nd	nd	nd	nd
CHLOROFORM	nd	nd	nd	nd	nd	nd	nd	nd
1,1-DICHLORO ETHANE	nd	nd	nd	nd	nd	nd	nd	nd
1,2-DICHLORO ETHANE	nd	nd	nd	nd	nd	nd	nd	nd
1,1-DICHLORO ETHENE	nd	nd	nd	nd	nd	nd	nd	nd
CIS-1,2-DICHLORO ETHENE	nd	nd	nd	nd	nd	nd	nd	nd
TRANS-1,2-DICHLORO ETHENE	nd	nd	nd	nd	nd	nd	nd	nd
DICHLOROMETHANE	nd	nd	nd	nd	nd	nd	nd	nd
TETRACHLORO ETHENE	nd	nd	nd	nd	nd	nd	14.4	257
1,1,1,2-TETRACHLORO ETHANE	nd	nd	nd	nd	nd	nd	nd	nd
1,1,2,2-TETRACHLORO ETHANE	nd	nd	nd	nd	nd	nd	nd	nd
1,1,1-TRICHLORO ETHANE	nd	nd	nd	nd	nd	nd	nd	nd
1,1,2-TRICHLORO ETHANE	nd	nd	nd	nd	nd	nd	nd	nd
TRICHLORO ETHENE	nd	nd	nd	nd	nd	nd	nd	nd
1,1,2-TRICHLOROTRIFLUOROETHANE (FR113)	nd	nd	nd	nd	nd	nd	nd	nd
BENZENE	nd	nd	nd	nd	nd	nd	nd	nd
ETHYLBENZENE	nd	nd	nd	nd	nd	nd	nd	nd
TOLUENE	nd	nd	nd	nd	nd	nd	nd	nd
m&p-XYLENES	nd	nd	nd	nd	nd	nd	nd	nd
o-XYLENE	nd	nd	nd	nd	nd	nd	nd	nd
SURROGATES								
1,4 DIFLUORO BENZENE	9.7	321	9.8	199	9.8	197	9.9	199
CHLOROBENZENE	16.1	572	16.1	513	16.1	507	16.2	508
1 BROMOFLUORO BENZENE	19.1	651	19.1	776	19.1	753	19.2	743

ND INDICATES NOT DETECTED AT A DETECTION LIMIT OF 1.0 UG/L-VAPOR FOR EACH COMPOUND

ANALYSES PERFORMED ON-SITE IN TEG'S DOHS CERTIFIED MOBILE LABORATORY (CERT #1745)
ANALYSES PERFORMED BY: MR. ALLEN GLOVER
DATA REVIEWED BY:

SCS ENGINEERS PROJECT #0198173
EARL MANUFACTURING
11862 BURKE STREET
SANTA FE SPRINGS, CA

TEG Project #981113W1
GC SHIMADZU 14A RIGHT
VOLATILE HALOGENATED AND AROMATIC HYDROCARBONS (EPA Method 8010/8020) ANALYSES OF SOIL VAPOR
AREA COUNTS

	SV5-8 DUP	SV5-8 DUP	SV6-8	SV6-8	SV7-10	SV7-10	SV8-8	SV8-8
DATE	11/13/98	11/13/98	11/13/98	11/13/98	11/13/98	11/13/98	11/13/98	11/13/98
ANALYSIS TIME	11:41	11:41	12:06	12:06	12:29	12:29	12:51	12:51
SAMPLING DEPTH (feet)	8	8	8	8	10	10	8	8
VOLUME WITHDRAWN (cc)	140	140	140	140	180	180	140	140
VOLUME INJECTED	1	1	1	1	1	1	1	1
DILUTION FACTOR	1	1	1	1	1	1	1	1
	RT	AREA	RT	AREA	RT	AREA	RT	AREA
CARBON TETRACHLORIDE	nd	nd	nd	nd	nd	nd	nd	nd
CHLOROFORM	nd	nd	nd	nd	nd	nd	nd	nd
1,1-DICHLORO ETHANE	nd	nd	nd	nd	nd	nd	nd	nd
1,2-DICHLORO ETHANE	nd	nd	nd	nd	nd	nd	nd	nd
1,1-DICHLORO ETHENE	nd	nd	nd	nd	nd	nd	nd	nd
CIS-1,2-DICHLORO ETHENE	nd	nd	nd	nd	nd	nd	nd	nd
TRANS-1,2-DICHLORO ETHENE	nd	nd	nd	nd	nd	nd	nd	nd
DICHLOROMETHANE	nd	nd	nd	nd	nd	nd	nd	nd
TETRACHLORO ETHENE	14.4	208	14.4	31	14.4	31	nd	nd
1,1,1,2-TETRACHLORO ETHANE	nd	nd	nd	nd	nd	nd	nd	nd
1,1,2,2-TETRACHLORO ETHANE	nd	nd	nd	nd	nd	nd	nd	nd
1,1,1-TRICHLORO ETHANE	nd	nd	nd	nd	nd	nd	nd	nd
1,1,2-TRICHLORO ETHANE	nd	nd	nd	nd	nd	nd	nd	nd
TRICHLORO ETHENE	nd	nd	nd	nd	nd	nd	nd	nd
1,1,2-TRICHLOROTRIFLUOROETHANE (FR113)	nd	nd	nd	nd	nd	nd	nd	nd
BENZENE	nd	nd	nd	nd	nd	nd	nd	nd
ETHYLBENZENE	nd	nd	nd	nd	nd	nd	nd	nd
TOLUENE	nd	nd	nd	nd	nd	nd	nd	nd
m&p-XYLENES	nd	nd	nd	nd	nd	nd	nd	nd
o-XYLENE	nd	nd	nd	nd	nd	nd	nd	nd
SURROGATES								
1,4 DIFLUORO BENZENE	9.8	258	9.9	198	9.9	194	9.8	192
CHLOROBENZENE	16.2	577	16.2	507	16.1	499	16.1	494
4 BROMOFLUORO BENZENE	19.2	824	19.2	748	19.1	735	19.1	736

ND INDICATES NOT DETECTED AT A DETECTION LIMIT OF 1.0 UG/L-VAPOR FOR EACH COMPOUND

ANALYSES PERFORMED ON-SITE IN TEG'S DOHS CERTIFIED MOBILE LABORATORY (CERT #1745)
ANALYSES PERFORMED BY: MR. ALLEN GLOVER
DATA REVIEWED BY: